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EXAMINER

CHAU, MINH H

ART UNIT PAPER NUMBER

2854

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/767,976

Applicant(s)

RAI ET AL.

Examiner

Minh H Chau

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of species 1, claims 1-12 in Paper No. 7 (filed on 06/12/03) is acknowledged. The traversal is on the ground(s) that the search required for the steps of claim 1 would include search areas, which would also include the subject matter for the restricted claims 13-18. This is not found persuasive because although the three species are in the same printing environment; however, the search for species 1 is only required the steps of receiving a print job, dividing the print job onto batches and processing the batches separately and concurrently to complete the print job, while the search for species 2 is required a different steps of identifying each of operation that is required to complete the print job based on a specified number of production items, determining a processing time required for each operation per production item, determining an inter-batch handling time that is required to switch between batches for each operation and determining a set up time for each operation; and the search for species 3 is required a different steps of representing workflow between operation of a print job as a sequence of interconnected nodes and edges, identifying the paths in the sequence of nodes and edges, identifying a critical longest path to complete processing of a batch and dividing a print job into batches of given batch sizes that are chosen to optimize the processing time of the critical path. Since the search for species 2 and 3 is required a different steps that explained above, therefore the search for species 2 and 3 would place an undue burden on the examiner. It is also noted that claim 17 is depend on claim 1; therefore claim 17 will be exams with species 1.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Objections***

2. **Claims 4 and 8** are objected to because of the following informalities:

**Claim 4** is missing a period at the end of the claim.

**Claim 8**, the term "if" (line 5) is a typo, perhaps the Applicant mean -- it --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 3 and 10** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner is unable to fully comprehend the language of these claims since the specification does not show or describe any details description regarding the relationship between a first batch and a second job and what steps or processing steps for the equipment to switch from a first batch to operating on a second job based on the size of each of the batches?

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. **Claims 3 and 10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 3 and 10, the language of these claims is unclear, which create confusion for the reader, the examiner is unable to understand the relationship between a first batch and a second job how does the equipment be able to switch from processing a fist batch to operating on a second job?

7. To the extended that **claims 3 and 10** are indefinite and understandable the following prior art rejections appear to be proper.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-12 and 17** are rejected under 35 U.S.C. 102(e) as being anticipated by Mima et al. (US 2002/0101604 A1).

With respect to claims 1 and 8, Mima et al. teach a printing system and a medium for storing instructions for performing a method in a printing environment having equipment for processing print jobs, the method comprising a steps of receiving a selected print job, dividing

the selected print data or print job into batches, where a size of each of the batches is selected to substantially optimize a time period it takes for the selected print job to be fully processed, and processing the batches separately and concurrently to complete processing of the print job, wherein each batch is processed by a subset of the equipment (see Figs. 1-7 and paragraph [0010-0060] of Mima et al.)

**With respect to claims 2 and 9,** see paragraph [0018-0019], [0046-0047] and [0056-60] of Mima et al. that teach the size of each of the batches is based at least in part on the time it takes for the equipment to fully process each batch.

**With respect to claims 3 and 10,** see paragraph [0044] of Mima et al. that teach a next print jobs or a second job is being hold in a queue so that it can be extracting for printing when a first print job is finished.

**With respect to claim 4,** see Fig. 1 and paragraph [0040-0041] of Mima et al. that teach the batches are all processed by a same group of the equipment.

**With respect to claims 5, 12 and 17,** see paragraph [0012, 0046-0047, 0055-0060] of Mima et al. that teach the size of each of the batches is determine or chosen to fully optimize or the time period it takes the selected print job to be fully processed or to minimize the total time required for complete printing of the print job.

**With respect to claim 6,** see Fig. 2 and paragraph [0017-0019, 0042] of Mima et al. that teach the selected print job is processed as a serial sequence of operations.

**With respect to claim 7,** see Figs. 1-2 and paragraph [0039-0044] of Mima et al. that teach the selected print job entails at least one assembly where documents from multiple sources are assembled into a single entity.

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**With respect to claim 11**, see Fig. 2 and paragraph [0039-0044] of Mima et al. that teach the subsets of each equipment that process the batches are mutually exclusive.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Applicant attention is invited to the patents to Hirai (JP 10-143450), Inami (JP 2000-322209) and Noda (US # 6,293,714).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh H Chau whose telephone number is (703) 305-0298. The examiner can normally be reached on M - TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MHC

